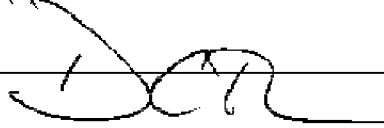


Patent Application Number: 10/502,101
Attorney Docket Number: 1110 006 301 0202

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number 1110 006 301 0202
	Application Number 10/502,101	Filed July 20, 2004
	First Named Inventor Giovanni Berti	
	Art Unit 2882	Examiner C. C. G. Kao
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a Notice Of Appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s) Note: No more than five (5) pages may be provided.</p>		
<p>I am the</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"><div style="width: 60%;"><p><input type="checkbox"/> applicant/inventor.</p><p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.</p><p><input checked="" type="checkbox"/> attorney or agent of record. Registration number 34,545.</p><p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34.</p><p><input type="checkbox"/> Registration number if acting under 37 CFR 1.34</p></div><div style="width: 35%; text-align: right; vertical-align: top;"><p> Signature <u>/Duane C. Basch, Esq. Reg. No. 34,545/</u></p><p>Typed name <u>Duane C. Basch</u></p><p>Telephone number <u>585-899-3970 x104</u></p><p>Date <u>April 2, 2007</u></p></div></div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>		
<p>* Total of 1 forms are submitted.</p>		

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

ARGUMENTS ACCOMPANYING REQUEST FOR PRE-APPEAL CONFERENCE

OBJECTIONS WITHDRAWN

In light of the Examiner's entry of previously-proposed amendments, Applicant understands the prior objections to be overcome and withdrawn.

REJECTIONS & APPLICANT'S ARGUMENTS IN TRAVERSAL THEREOF

Claims 1-7 and 11-15 were rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi. Applicant respectfully traverses the rejection, contending that Aslanov discloses a laboratory diffractometer that permits analysis of samples that are small relative to the stage supporting the sample holder. Rotation of the analytical unit is possible, however, the position of the center of the diffractometer and the equatorial axis is fixed. The Examiner acknowledges that the diffractometer according to Aslanov differs from the presently claimed diffractometer by the fact that Aslanov fails to disclose the possibility of changing the position of the equatorial axis (Z-axis in Aslanov), which is fixed.

To provide the missing disclosure, the Examiner then alleges that in view of Kikuchi it would have been obvious to add this movement, because Kikuchi discloses positioning of the analytical unit that implies translation of the equatorial axis (i.e. an axis parallel to the axis and the lateral surface of the ingot in Kikuchi). The axis may thus translate parallel to itself in a horizontal plane (in order to position the equatorial axis on the ingot's surface).

It appears that the Examiner is suggesting that by placing the analytical unit of Aslanov (i.e. stage 2 with mechanism 3) on a traveling table (like table 46 of Kikuchi), would result in the equatorial axis Z of Aslanov translating parallel to itself. It is, however, not apparent how other movements could be added to the axis Z of Aslanov in such a configuration.

The Examiner states that this translation movement would have been desirable, contrary to Applicant's prior response. According to the Examiner this would allow examination of bigger samples, without the need to cut them into smaller pieces. Applicant respectfully disagrees with the rejection and the Examiner's basis therefore, for reasons set forth below.

The disclosure of Aslanov is directed to a diffractometer with a special sample holder providing rotational movement about an axis parallel to the base. The apparatus of Aslanov is suitable for very small samples, as is understood from the figures and the description, for example at page 10 of Aslanov, lines 1-4. Such small samples are described as being glued to the sample holder.

The sample holder of Aslanov, which is regarded as an essential element of the disclosed apparatus, is unsuitable for samples bigger than the size disclosed and it would be impossible to rotate a bigger sample around an axis parallel to the base. No suggestion on how to modify the sample holder for that purpose can be found in Aslanov. Furthermore, Kikuchi fails to suggest any solution to the problem, since the sample holder of Kikuchi is designed for a specific kind of sample (i.e. monocrystalline cylindrical ingots).

Moreover, in order to carry out a diffractometry, in particular an x-ray diffractometry, the point under investigation (which must coincide with the centre of the diffractometer) must be on the surface of the sample, in particular with samples having non-negligible dimensions. By adding to Aslanov the movement suggested and described above the centre of the diffractometer would simply translate horizontally. This movement, Applicants respectfully contends, would be insufficient to correctly position the center of the diffractometer on the surface of a sample of extensive dimensions and of a generic shape. In this regard, Applicant also points out that the Examiner's proposed modification of the diffractometer of Aslanov by adding table 46 of Kikuchi would not add any other movement to the equatorial axis Z than the described translation movement.

A fine tuning of the position of the centre of the diffractometer in the apparatus of Aslanov, is suitable for samples of the kind suggested in that document. This tuning can be done by adding further movements to the sample holder, as suggested in Aslanov (p. 9, l. 15 to 24), which is much simpler than moving the whole analytical unit and would thus be the choice of one skilled in the art. Thus, one of skill in the art would have found no reason, and would not have been motivated, to add to Aslanov any movement other than those already described in that document, because:

- a) the apparatus of Aslanov is suitable only for small samples that can be supported on the sample holder disclosed therein, and for such samples the apparatus is already suited for carrying out complete analysis; and
- b) by modifying that apparatus in the way suggested by the Examiner, it

would still be unsuitable for carrying out analyses on bigger samples, in spite of the Examiner's assertions to the contrary.

Finally, as further indicia of non-obviousness the reason for a combination of all the movement means recited in amended claim 1 is, as set forth in the specification, to enable the apparatus to perform a complete diffractometry on samples of extensive dimensions, samples which cannot be placed in a sample holder and in some case not even be moved. No such teaching is found either in Aslanov, suitable only for very small samples and having a fixed equatorial axis, or in Kikuchi, where the movements are customized for a sample of very specific shape and structure, yet still require a specific sample holder. Thus, the problem solved by the claimed invention is not even described by Aslanov or Kikuchi. Stated in another way, the difference in the kind of samples to which Aslanov and Kikuchi are directed would discourage one of skill in the art from considering any possible combination between the two.

In view of the arguments set forth herein, Applicant respectfully contends that *prima facie* obviousness has not been established in that the references relied upon are not properly combined. Moreover, the arguable combination still fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as presently recited in amended claims 1 and 12. Claims 1 and 12 are, therefore, respectfully submitted to be in condition for allowance.

For purposes of brevity, the further distinctions set forth in the rejected dependent claims are not specifically set forth. Applicant respectfully reserves the right to further address such limitations in the event the rejection of claims dependent from claims 1 or 12 is maintained.

Claim 8 was rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi as applied to claim 3, and further in view of Koblenz. Applicant respectfully traverses the rejection, and incorporates the arguments set forth above relative to claim 1 as though fully set forth herein.

Applicant further maintains that the rejection of claim 8 fails to set forth a basis for the proposed combination of Koblenz, to the arguable combination of Aslanov and Kikuchi. More specifically, the Examiner urges that the motivation to include the teachings of Koblenz is based in a desire to improve the signal-to-noise ratio "as implied by Koblenz." In the Advisory Action the Examiner suggests that it is known in the art that reducing

noise levels is desirable. To this Applicant notes that under MPEP 2143.01, “The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). ‘In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.’ *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006).”

Applicant maintains that Koblenz’ suggestion of a reduction in the noise level of the apparatus does not address any problem identified by either Aslanov or Kikuchi – hence there was no motivation to combine the teachings. Absent such a suggestion, it is clear that the Examiner has used Applicant’s claim limitations as a “recipe” by which elements from unrelated patents are selected for hindsight reconstruction of the claimed invention.

Furthermore, the arguable combination still fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as recited in amended claim 1, from which claim 8 depends. Accordingly, Applicant respectfully submits that *prima facie* obviousness has not been established and traverses the rejection of dependent claim 8.

Claims 9 and 10 were rejected under 35 USC §103(a) as being unpatentable over Aslanov in view of Kikuchi as applied to claim 1, and further in view of Fink. Applicant again traverses the rejection, and hereby incorporates the arguments set forth above relative to claim 1 as though fully set forth herein. Applicant also respectfully maintains that the rejection fails to set forth a basis for the proposed combination of Aslanov in view of Kikuchi and further in view of Fink.

With respect to claim 9, the alleged combination fails to teach means for moving the analytical unit with respect to the base, or moving the analytical unit to change the position of the equatorial axis with respect to the base, as recited in claim 1, from which claim 9 depends.

Considering claim 10, the claim is patentably distinguishable from the proposed combination for the reasons previously discussed relative to claims 1 and 9. Furthermore, with regard to the objections against claim 10, Applicant notes that Fink uses a unique laser and cameras. In the Fink system a unique laser is sufficient to place the specimen in the center of the diffractometer. Fink is referring to a traditional diffractometer (an apparatus like Aslanov - to use the same references of the examiner - in which all the system is mechanically linked and in which "the zero point" is exclusively and mechanically defined). The planes are mechanically defined and the specimen holder has to be placed with respect to them. Hence, a unique laser is sufficient and Applicant maintains there is no teaching or suggestion of the claimed improvement of introducing two or more lasers.

In the diffractometer of the present application the center is geometrically, but not mechanically, defined. Thus, a unique laser is not sufficient to precisely place the diffractometer. As a solution the inventor utilizes the recited two lasers and a telecamera. Such a solution cannot be taught by the patents relied upon as they do not even describe such a problem.

Applicant reiterates the belief that the Examiner has mis-characterized the claimed dual-laser configuration as "mere duplication" of the Fink laser. In response Applicant asks, just what improvement in reliable positioning would have been achieved by the use of a second laser? Absent such a teaching, the Examiner has failed to establish obviousness and has merely obfuscated the lack of support for the rejection by suggesting "mere duplication" as the basis for the rejection.

Conclusion: In view of the arguments presented above, and in the Response After Final submitted Jan. 3, 2007, Applicant respectfully requests that the Pre-Appeal Conference panel withdraw the rejections, and instruct the Examiner to indicate the allowance of the pending claims.

Respectfully submitted,


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